Progress Report: Regional Value Pricing Study

Updated with the 2006 CLRP

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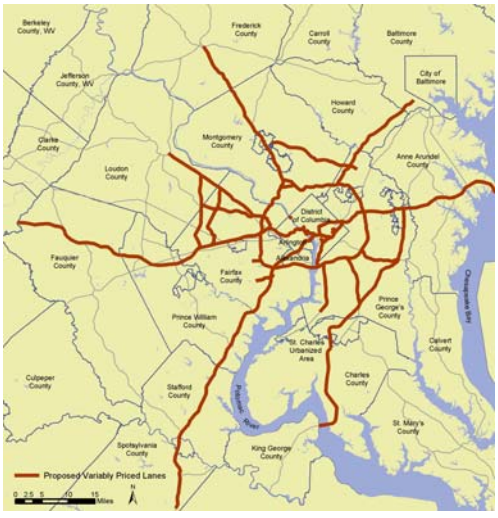
April 18, 2007

TPB Value Pricing Task Force

- Created Fall 2003 following June 2003 Regional Conference
- Examine the benefits of value pricing for the Washington region
- Goals approved by TPB, April 2005
- Study a regional system of variably priced lanes (VPLs)



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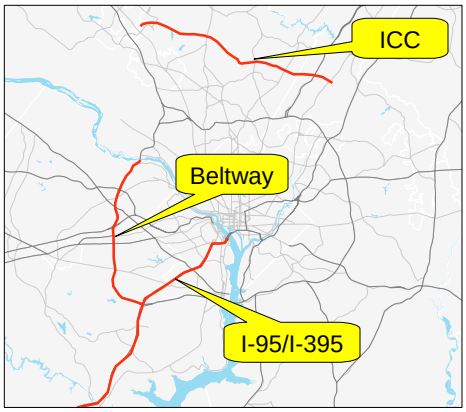
Current Value Pricing Projects

- Intercounty Connector (ICC)
  - 2004 CLRP Update*
- Beltway HOT
  - 2005 CLRP Update*
- I-95/I-395
  - Under development
- Regional Network
  - Regional Mobility and Accessibility Study



* Federal Record of Decision approved

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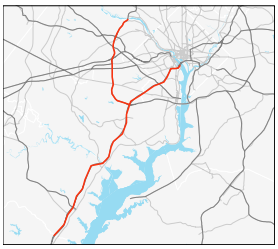
TPB Value Pricing Analyses to Date

- Assisting Virginia DOT in analyzing key corridors
  - Beltway
  - I-95/I-395
- Sensitivity Analysis of Enhanced Transit on the Beltway and I-95/I-395 HOT Lanes for 2010
- Starting Point “Scenario A” developed and analyzed under Regional Mobility and Accessibility Study (RMAS).



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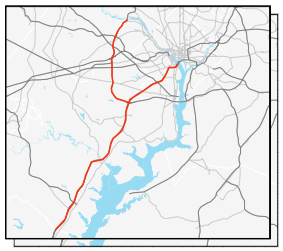
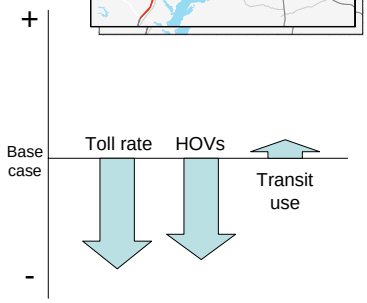
Sensitivity Analysis: Impacts of Enhanced Transit

Transit service levels increased on Beltway and I-95/395 HOT Lane transit routes for 2010:

- Decrease in toll rates and HOV use
- Increase in transit use
- Slight increase in VMT
- Total revenue essentially unchanged
- Slight increase in speeds on mixed use lanes





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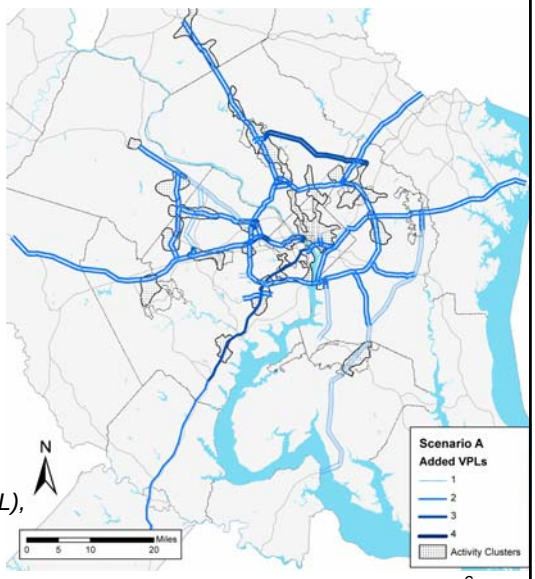
Scenario A

In addition to the ICC, Beltway and I-95/395 as described previously:

- All Freeways:
  - Add 2 VPLs
- Arterials outside of beltway:
  - Add 1 VPL
- Existing HOV lanes:
  - Convert to VPLs
- Direct access ramps at key interchanges
- Incorporate existing transit service

Variably Priced Lanes (VPLs):
- *VA: HOT lanes, HOV 3+ free*
- *DC, MD: Express Toll Lanes (ETL), all pay*



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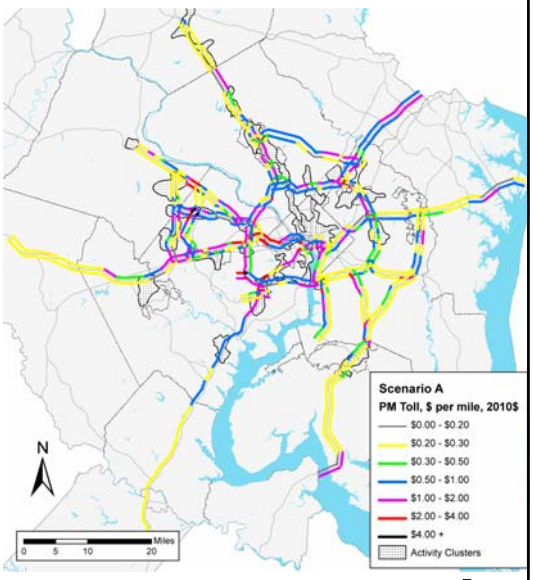
Scenario A: Resulting Tolls

- To ensure free flow, toll rates vary significantly by segment, direction and time of day
- Tolls in 2010 dollars



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New Grant Under FHWA Value Pricing Pilot Program

- Cooperative Agreement Approved Sept 2006
- $300,000 Total Budget Over One Year
- Anticipated Completion Date: Sept 30, 2007
- Allows scenario developed under RMAS to be evaluated in greater detail, and includes additional corridors, such as parkways

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Regional Value Pricing Study

(FHWA Value Pricing Pilot Program Grant)

Task	2006			2007								
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Task 1: Examine high potential corridors for variably priced lanes.												
Estimated Cost: $100,000												
Task 2: Identify potential toll revenues, costs, transit viablity and land use activity changes for specific high potential corridors.												
Estimated Cost: $100,000												
Task 3: Analyze high potential corridors as a Phase 1 regional network.												
Estimated Cost: $50,000												
Task 4: Identify how potential impacts on low-income and minority populations could be identified.												
Estimated Cost: $40,000												
Task 5: Develop a study report with major findings.												
Estimated Cost: $10,000												
Update and Gather Input from the Value Pricing Task Force												
Brief the Joint Techncial Working Group												
Estimated Total Cost: $300,000												
Federal: $240,000 State/Local: $60,000												

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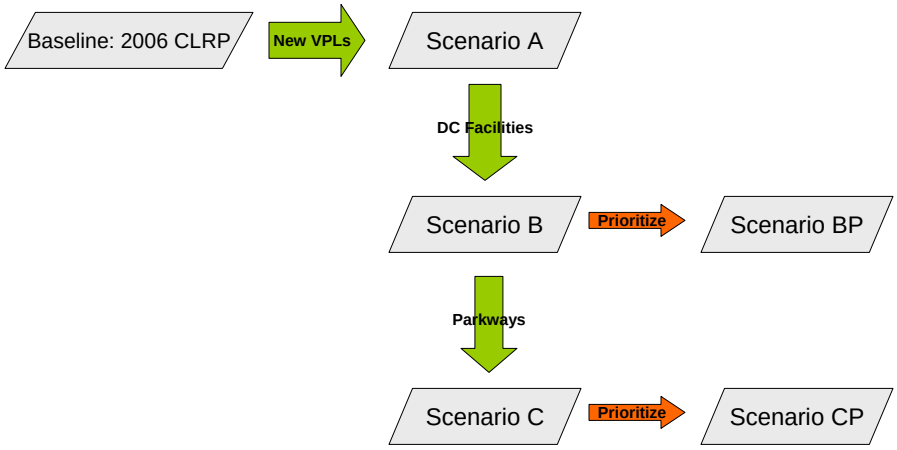
Task 1: Create Network of High Potential Corridors for 2030



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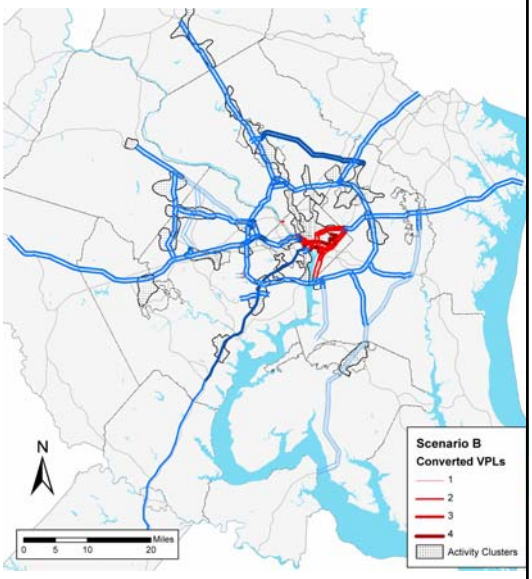
Scenario B: Add Variable Pricing to Existing DC Bridges and Other Facilities

- **DC Bridges (Existing Capacity)**
  - Chain Bridge
  - Key Bridge
  - Memorial Bridge
  - South Capitol Street (Frederick Douglas) Bridge
  - Pennsylvania Avenue (John Phillip Sousa) Bridge
  - East Capitol Street (Whitney Young Memorial) Bridge
  - Benning Road Bridge
- **Other DC Facilities (Existing Capacity)**
  - New York Avenue from the District line to I-395 at 4th St NW
  - Independence Ave SW and Maine Ave SW between the Memorial Bridge and the Southeast/Southwest Freeway
  - Remove added capacity on Southeast/Southwest Freeway and I-295 and toll all existing lanes.
- **Additional VPLs to Address Scenario A Chokepoints**
  - Fairfax County Parkway northbound and southbound at the Dulles Toll Road (VA-267)
  - Braddock Road westbound at the Capital Beltway (I-495)
  - Indian Head Highway (MD-210) southbound at the Capital Beltway (I-495)



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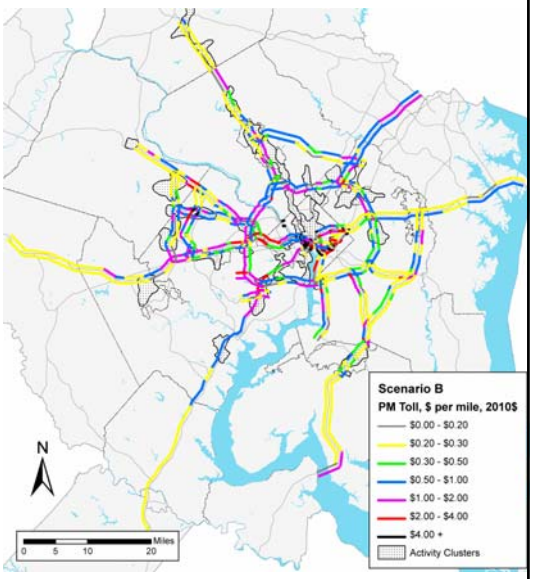
Scenario B: Resulting Tolls

- Compared to Scenario A:
  - High toll rates on DC Bridges (mostly between $3 and $10 per mile; between $1 and $4.25 per one-way crossing)
  - System-wide toll revenue increases by 33%
  - Small reduction in system-wide VMT (<1%)
  - HOV use decreased by 3%
  - Transit trips increase by 2%



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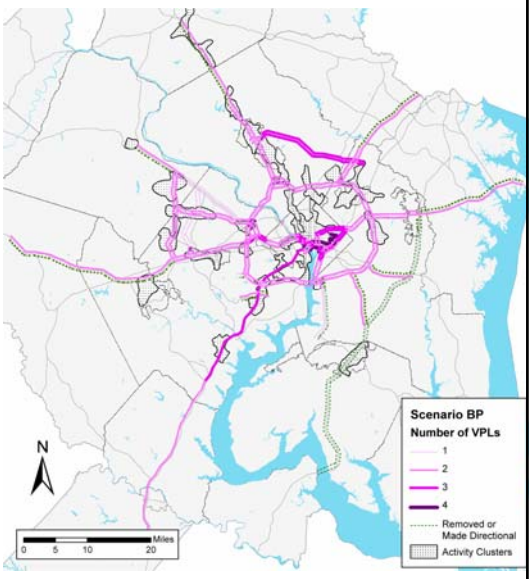
Scenario BP: Prioritizing from B

-Drop facilities/directions with low toll rates

- 2030 Scenario B network pared back where demand is low, as indicated by low toll rates:
  - Segments that have high toll rates in the peak direction only are changed to directional toll lanes
  - Segments with low toll rates in both directions are removed from the network



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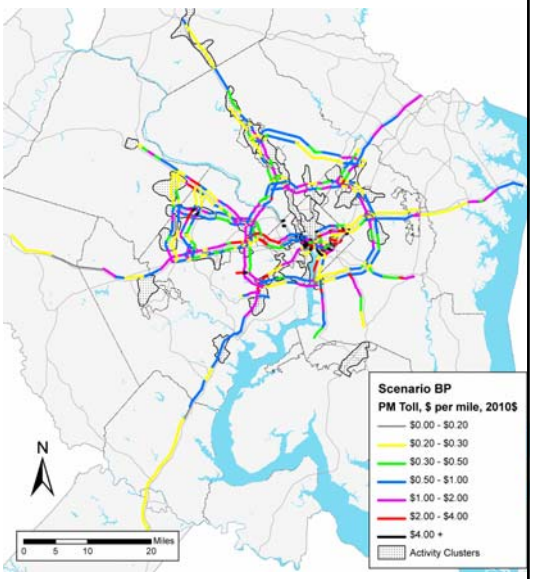
Scenario BP: Resulting Tolls

- Compared to Scenario B:
  - Bridge tolls slightly lower
  - System-wide toll revenue decreases by 9%
  - Small reduction in system-wide VMT (<1%)
  - HOV use increases by 7.5%
  - Transit trips unchanged



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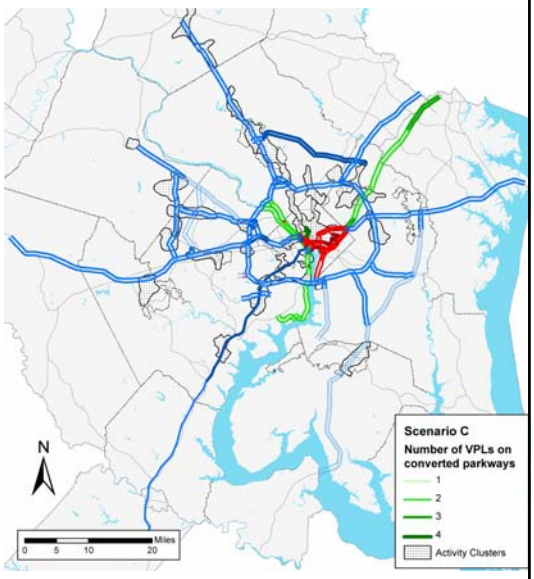
Scenario C: Add Parkways to Scenario B

-Tolls applied to existing capacity

- Baltimore Washington Parkway (MD-295)
- George Washington Parkway
- Rock Creek and Potomac Parkway
- Clara Barton Parkway



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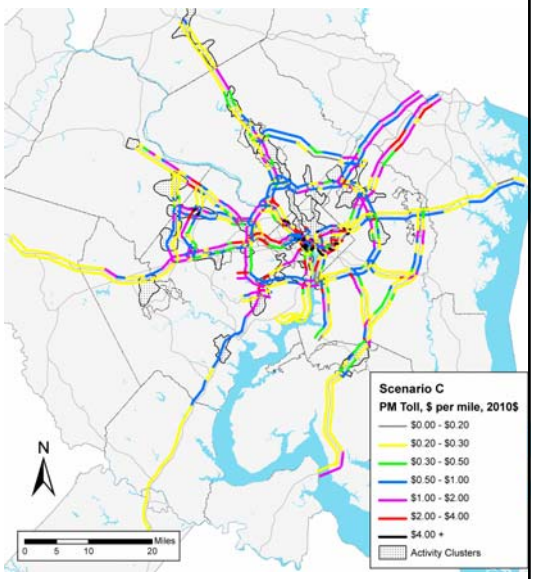
Scenario C: Resulting Tolls

- Compared to Scenario B:
  - System-wide toll revenue increases by 31%
  - Small reduction in system-wide VMT (<1%)
  - HOV use increases slightly (<1%)
  - Small increase in transit trips (1%)



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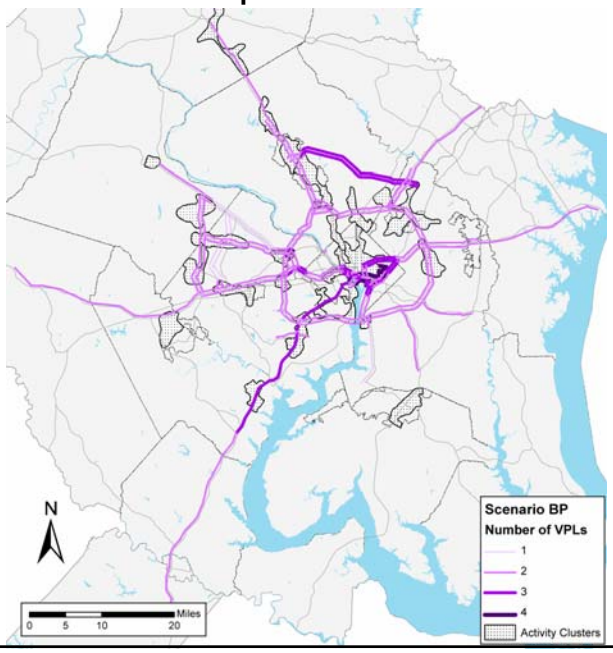
Scenario BP: Proposed Phase 1 Network



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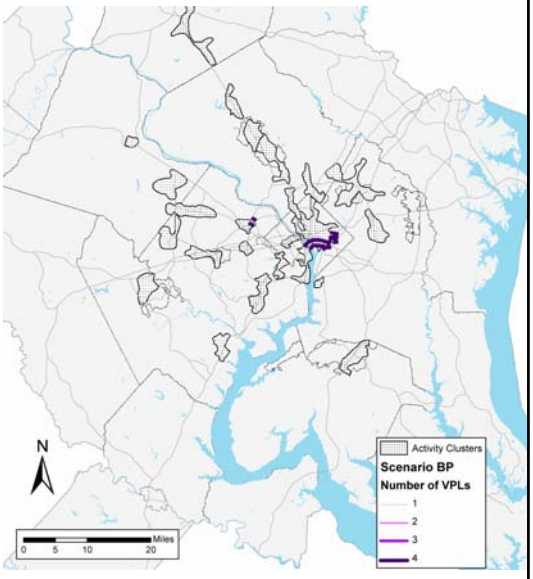
BP Network: 4-lane VPL Segments

- Segments of the network with 4 VPLs in each direction include:
  - Southeast/South-west Freeway
  - DC Bridges: 14th Street, 11th Street, Benning Road and East Capitol Street



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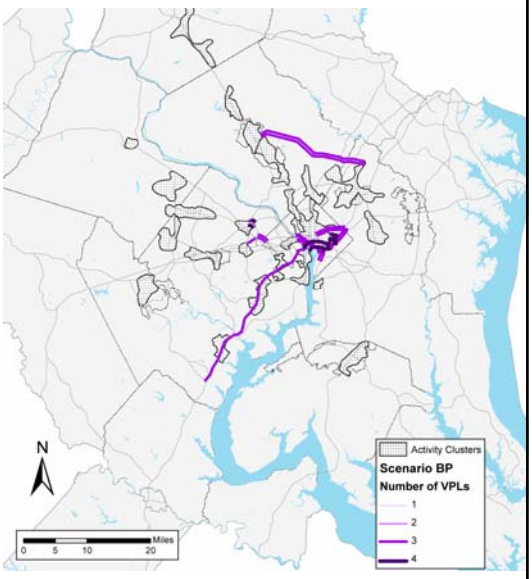
BP Network: 3-lane VPL Segments

- Segments of the network with 3 VPLs in each direction include:
  - The Intercounty Connector
  - The Shirley Highway (I-95/395) HOT Lanes
  - Kenilworth Ave NE from the District line to East Capitol St.
  - I-295 in the District from the South Capitol St. Bridge to Malcolm X Ave SE.
  - DC Bridges: Roosevelt, Memorial, South Capitol and Pennsylvania Avenue
  - Maine Ave. and Ohio Drive.
  - Portions of I-66 inside the beltway



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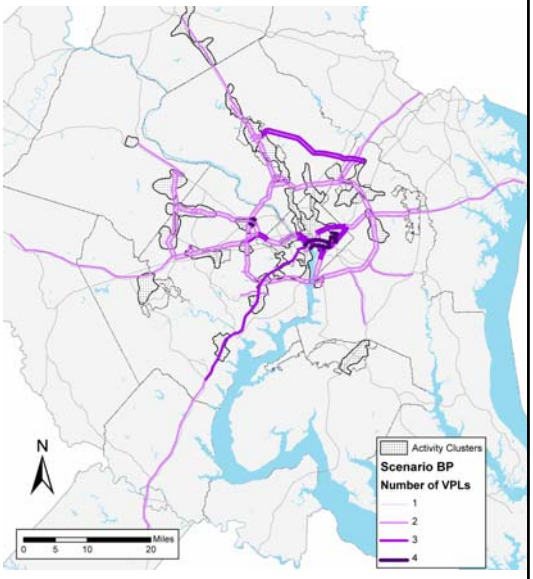
BP Network: 2-lane VPL Segments

- Segments of the network with 2 VPLs in each direction include:
  - The Capital Beltway
  - US-50 in Maryland from the District line to Bowie
  - I-66 from the District to VA-28
  - Dulles Toll Road from I-66 to VA-28
  - I-270 from the Beltway to Germantown.
  - I-95 (MD) from the Beltway to MD-198
  - VA-28 from I-66 to VA-7
- Directional VPL segments include:
  - VA 7 from Sterling to Leesburg
  - I-66 from VA-28
  - US-50 from Bowie to the Bay Bridge
  - I-95 from MD 198 to the Baltimore County Line
  - MD 4 and MD 5 from the Beltway to US-301
  - I-270 from Germantown to Frederick
  - I-95 from Dumfries to Fredericksburg



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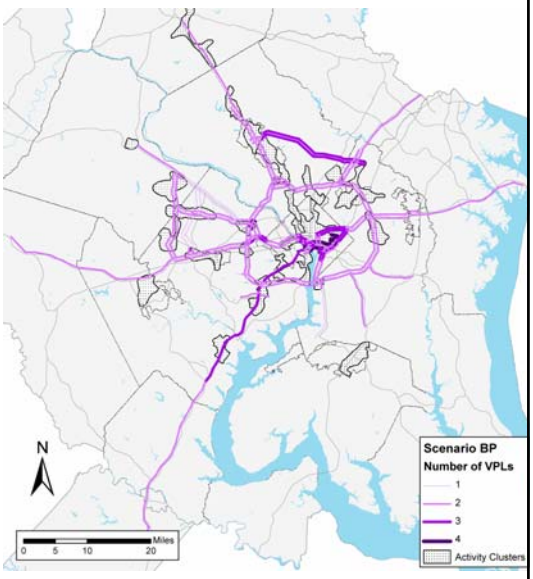
BP Network: 1-lane VPL Segments

- Segments of the network with one VPL in each direction include:
  - Fairfax County Parkway between I-66 and VA-7
  - VA-7 between VA-267 and Leesburg
  - MD 210



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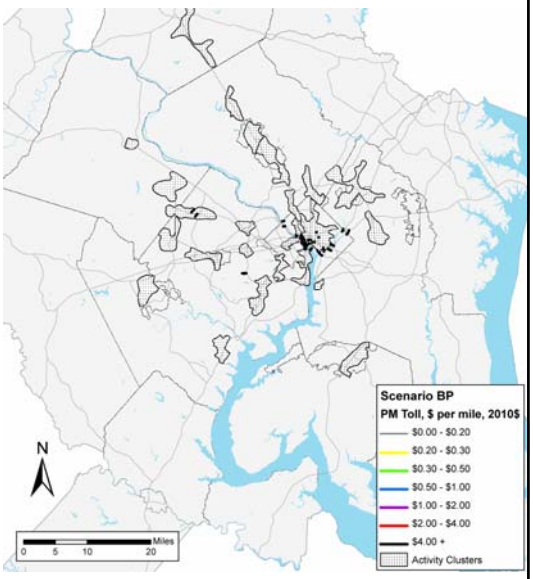
BP Network: Major Chokepoints

- High tolls and traffic volumes indicate chokepoints:
  - Nearly all DC River crossings
  - Kenilworth Ave at the DC/MD line
  - Independence Avenue
  - New York Ave at 4th St NW/I-395
  - Braddock Road outside the Beltway
  - Fairfax County Parkway at VA-267



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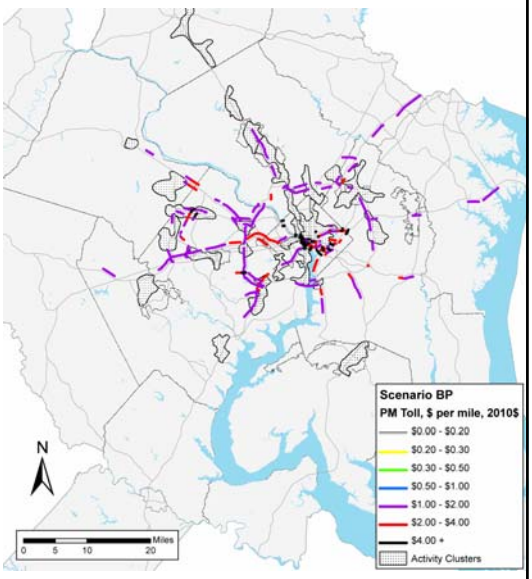
BP Network: Segments where Tolls Exceed $1 per mile

- Sections of the BP Network with PM tolls greater than $1 per mile:
  - Much of I-66 outbound
  - Northwestern half of the Capital Beltway
  - Portions of I-95 in MD and VA
  - I-270 through Rockville and Gaithersburg
  - Sections of Fairfax County Parkway
  - Segments of other arterials outside the Beltway



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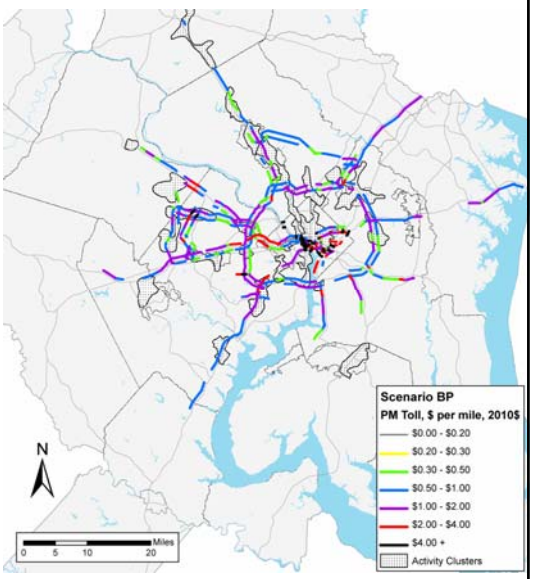
BP Network: Segments with tolls between $0.30 and $1.00 per mile

- Other segments with significant tolls (greater than $0.30 per mile):
  - The ICC
  - VA-267
  - I-66 inbound between VA-28 and the Beltway
  - I-270 Spur and nearby segments of the beltway
  - VA-28
  - Portions of US-50 (MD),
  - Remainder of the Beltway



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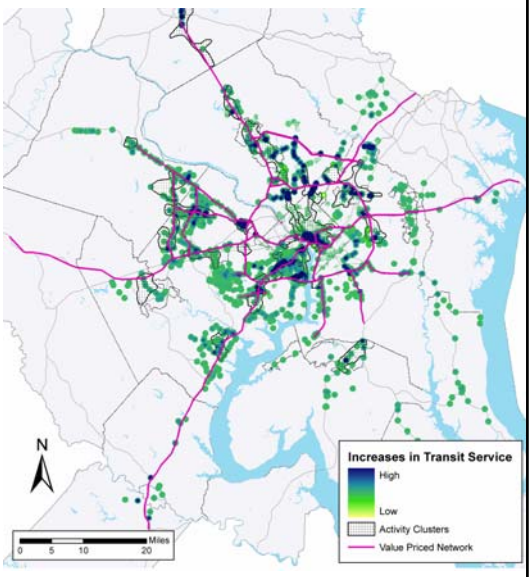
Starting Task 2: Transit on the VPL Network

- Create a bus transit network that operates on the network of variably priced lanes:
  - All planned transit along BP Network
  - Add Beltway bus routes from the TPB-assisted studies
  - Create routes on VA 28 and Fairfax County Parkway
    - Running between I-66 and VA-7
    - Include stops at major activity centers
- Enhance bus speeds/frequencies:
  - Increase speeds, reducing run-times by 10%
  - Increase frequency, reducing headways by 50%



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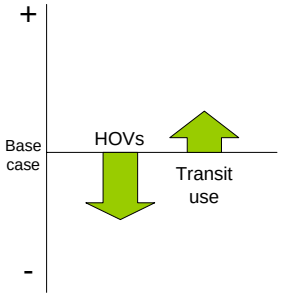
Impacts of Enhanced Transit

- Increasing Transit Service on the Value Priced Network Results In:
  - Decrease in HOV use: 7%
  - Increase in total system transit use: 4%
  - Slight increase in total VMT
  - Total system revenue essentially unchanged



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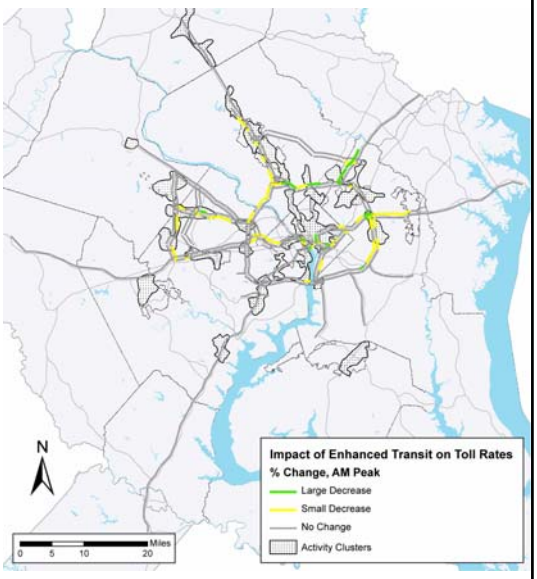
Enhanced Transit: % Change in Toll Rates (AM Peak)

- Preliminary results:
  - Decrease or no change in toll rates in most corridors
  - Decrease in toll rates along several inbound segments
  - Further study underway



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Next Steps

Task 2 Continued
- Refine and Finalize Transit Impacts
- Land Use Changes
  - Which areas might experience changes in land use due to increased accessibility?
- Phasing Plan
  - Which corridors could be included by 2020? 2010?

Task 3
- Network of High Potential Corridors: Financial Analysis and Feasibility

Task 4
- Equity Analysis
  - What will be the impacts on low-income and minority populations?

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